



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/567,943

02/10/2006

Satoru Wakamatsu

1217060312

4566

28289 7590 12/10/2007  
THE WEBB LAW FIRM, P.C.  
700 KOPPERS BUILDING  
436 SEVENTH AVENUE  
PITTSBURGH, PA 15219

EXAMINER

MARTINEZ, BRITTANY M

ART UNIT

PAPER NUMBER

4116

MAIL DATE

DELIVERY MODE

12/10/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |   |   |  |
|------------------------------|---|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/567,943    | <b>Applicant(s)</b><br>WAKAMATSU ET AL. |  |
|                              | <b>Examiner</b><br>Brittany M. Martinez | <b>Art Unit</b><br>4116                 |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/19/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

Citation to the Specification will be in the following format (S. #,LL) where # denotes the page number and LL denotes the line number. Citation to U. S. Patent literature will be in the format (Inventor, #, LL) where # is the column number and LL is the line number. Citation to U. S. Patent figures will be in the format (Inventor, FIG. number, part number).

### ***Status of Application***

Applicant's election **without traverse** of Group I (**Claims 1-4**) in the reply filed on November 19, 2007 is acknowledged. **Claims 5-6** are withdrawn from further consideration pursuant to CFR 1.12(b) as being drawn to a nonelected invention.

### ***Priority***

1. Applicant's claim for foreign priority in regard to JP 2003-293197, filed August 13, 2003, is acknowledged. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
2. Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a certified English translation of the foreign application must be submitted in reply to this action. 37 CFR 41.154(b) and 41.202(e).

Failure to provide a certified translation may result in no benefit being accorded for the non-English application.

#### ***Title***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested: *Tubular Reaction Vessel for Production of Silicon*.

#### ***Specification***

The disclosure is objected to because of the following informalities: it appears as if “know” (S. 13, 6) should be changed to “known.” Appropriate correction is required.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

#### ***Claim Objections***

3. **Claims 3-4** are objected to because of the following informalities: it appears as if “...is a protrusion provided in...” (**Claim 3**, lines 2-3 and **Claim 4**, lines 2-3) should read “...is protrudent...” Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. **Claim 3** recites the limitation "the external wall" in the 4<sup>th</sup> line of the claim. There is insufficient antecedent basis for this limitation in the claim.
6. **Claim 4** recites the limitation "the other area" in the last line of the claim. There is insufficient antecedent basis for this limitation in the claim.
7. **Claim 3** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation "...the reaction vessel is reduced in thickness from the external wall..." (**Claim 3**, lines 3-4) is unclear and necessitates clarification.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-4** are rejected under 35 U.S.C. 102(e) as being anticipated by

Wakamatsu et al. (US 6,861,144).

With regard to **Claim 1**, Wakamatsu discloses a tubular reaction vessel comprising a longitudinally-extending wall with a space thereinside (Wakamatsu, FIG. 4, 1), wherein a silicon deposition feedstock gas inflow opening (Wakamatsu, FIG. 4, 5) and a deposited silicon discharge opening (Wakamatsu, FIG. 4, 2) are provided at an upper portion and a lower end portion respectively, and a flow resistance-increasing region is created on a wall surface of the tubular reaction vessel that is contacted with the feedstock gas (Wakamatsu, FIG. 4, 1), substantially as in the instant.

With regard to **Claims 2-4**, Wakamatsu discloses a tubular reaction vessel wherein the flow resistance-increasing region is a protrusion provided in the tubular reaction vessel, the reaction vessel is reduced in thickness from the external wall in the protrusion-provided area (Wakamatsu, FIG. 4, 1), and the tubular reaction vessel is arranged to be heated by a high frequency heating coil and includes means for reducing high frequency energy from the high frequency heating coil in the protrusion-provided area relative to the other area (Wakamatsu, FIG. 4, 3; paragraphs 49-52 and 59), substantially as in the instant.

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

Art Unit: 4116

1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. **Claim 1** is provisionally rejected on the ground of nonstatutory obviousness-type

double patenting as being unpatentable over Claim 1 of copending Application No.

10/518197. Although the conflicting claims are not identical, they are not patentably

distinct from each other because Application No. 10/518197 discloses a tubular reaction

vessel comprising a longitudinally-extending wall with a space thereinside, wherein a

silicon deposition feedstock gas inflow opening and a deposited silicon discharge

opening are provided at an upper portion and a lower end portion respectively, and a

flow resistance-increasing region is created on a wall surface of the tubular reaction

vessel that is contacted with the feedstock gas, substantially as in the instant.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### **Conclusion**

1. No claim is allowed.

2. In general, prior art renders the claimed invention anticipated and obvious.

3. Applicant is required to provide pinpoint citation to the specification (i.e. page and paragraph number) to support any amendments to the claims in all subsequent communication with the examiner. **No new matter will be allowed.**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brittany M. Martinez whose telephone number is (571) 270-3586. The examiner can normally be reached Monday-Thursday 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571) 272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BMM

/Vickie Kim/



Application/Control Number: 10/567,943

Page 8

Art Unit: 4116

Supervisory Patent Examiner, Art Unit 4116